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1990 AGRICULTURAL OUTLOOK: GRAINS AND OILSEEDS

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SLIDE 1: WORLD GRAIN AND OILSEED PRODUCTION AND USE

A. Markets for U.S. grains and oilseeds are global

1. Since 1973, exports have accounted for:

   --60% of all wheat utilization

   --40% of all soybean disappearance

   --26% of all corn use

2. Exports = 2 of every 5 crop acres

3. 38 cents of every dollar of farm income earned from grains and oilseeds comes from export sales

B. Over time, annual world-wide production and use are closely matched

C. For most of the past decade, annual production has exceeded use

1. When production exceeds use (most years prior to 1987/88):

   a. stocks accumulate

   b. values (prices) depreciate

   c. prices in 1986/87 averaged 40% **below** 1980/81

D. Since 1987/88 annual production has fallen below use

1. Production declines reflect a combination of:

   a. acreage reductions

   b. drought-reduced yields

2. Global stocks have been drawn down for 3 consecutive years

   a. declining stocks results in "seller demand" for inventories, bidding-up market prices

b. prices in the past 2 years have averaged 31% **above** the previous 2 years

3. Projections for 1990/91 based on 10-year trends and assumption of **normal** weather:

a. for the 4th year in a row, use is likely to (at least marginally) exceed production

b. comparing 1990/91 projections with 1980/81:

--average annual growth in use has exceeded growth in production by more than 7 million metric tons

4. Thus, global trends suggest that, fundamentally, prices entering the 1990s should be stronger than during much of the 1980s

E. Comparing trends in U.S. production with the rest of the world:

1. The U.S. has accounted for virtually all of the decline in production

2. Since 1979:

--Non-U.S. production has trended **upward** at an average annual rate exceeding 33 million tons

--U.S. production has trended **downward**

3. This increasing global competitiveness helps explain the U.S. stake in bringing about international harmonization of farm policies, in particular:

--reduction in production subsidies in other countries

--spreading the production adjustment process to other countries

a. the U.S. perspective is, an unrestricted international market environment would accomplish both

b. in essence, this perspective is based on the presumption that the gains to society at large from unfettered trade more than offset the losses to individuals whose income is protected by subsidies and other interventionist policies

--most economic research supports this presumption

--but, mechanisms for equitably dealing with income redistribution issues are generally ignored (that is, how society at large re-imburses the losers)

SLIDE 2: CORN SUPPLY AND USE

	1988/89	change	projected 1989/90	change
planted acreage (mil)	67.6	+2.3%	72.3	+7%
harvested acreage (mil)	58.2	-1.7%	65.2	+12%
yield (bu/ac)	84.6	-29.2%	114	+35%
production (mil bu)	4,921	-30.4%	7,450	+51%
carry-in (mil bu)	4,259	-12.8%	1,930	-55%
total supply (mil bu)	9,185	-23.2%	9,380	+2%
feed use (mil bu)	3,925	-17.2%	4,250	+8%
total domestic use (mil bu)	5,180	-13.2%	5,550	+7%
exports (mil bu)	2,075	+19.8%	1,950	-6%
total use (mil bu)	7,255	-5.8%	7,500	+3%
carry-out (mil bu)	1,930	-54.7%	1,800	-2%

A. 1988/89 comments:

1. Production was down 30% because of last year's drought

   --average yields were the lowest since 1983 (previous drought), about 33 bu. below trend line

2. Total supplies were down only 13% because of the 2nd largest carry-over ever (55% of annual use)

3. Exports were surprisingly strong, up 20%

   --gain was entirely due almost entirely to a tripling in shipments to the USSR

4. Downward adjustment in use due to reduced supplies was entirely in domestic feeding

   a. decline of about 800 mil. bu. from unusually high levels exceeding 4.7 bil. bu. in two previous years

   b. domestic feeding has become the most price-sensitive use of corn, i.e.

change from previous year	1986/87	1988/89
average price	-32%	+27%
domestic feed use	+691 mil bu	-813 mil bu
other domestic use	+32 mil bu	+26 mil bu
exports	+263 mil bu	+343 mil bu

5. Carry-out stocks declined 55% to only about 25% of annual use, lowest since 1984/85

B. 1989/90 comments:

1. Despite 51% larger crop, total supplies are only marginally larger than last year

   --sharp decline in carry-in stocks off-set production increase

2. Modest recovery in feed use is expected

   a. feeding margins have generally been at or above break-even

   b. forage supplies are limited and of relatively low quality

   c. no. of grain-consuming animal units about level

   d. lower summer-fall corn prices than in 1988 when greatest cuts in feeding rates occurred

3. But feed use is not likely to return to extraordinary high levels of 1986/87 and 1987/88

   --corn prices are high enough to discourage wasteful feeding practices

4. Export prospects are the most uncertain at this point

   a. depend heavily on how much the USSR buys

b. negative:

--a 10 mil. ton increase in the 1989 Soviet crop

c. positive:

--probable granting of "most favored nation" status to the USSR

--continued efforts by the Soviets to increase livestock production

d. export shipments have started 1989/90 at a slow pace

--trailing a year-earlier by 20-25% through 1st couple months of the marketing year

--but, smaller supplies of subsidized feed-quality wheat available from the European Community this fall/winter indicate a pick-up in the export pace is likely

--by late spring, exports could again trail off in light of competition from an expected larger 1990 Argentine crop

5. Carry-out next August 31 will be about the same as the carry-in

--may be marginally smaller if exports come within 50 mil. bu. or so of the 2 bil. bu. level

--but will still be around 25% of annual use

SLIDE 3: CORN STOCKS-PRICE RELATIONSHIP

A. Graph shows the historic relationship between year-end carry-out stocks and the season average price as a percent of the price support loan rate

B. 1988/89 Ohio price averaged $2.63

1. This was 148% of the national average loan rate of $1.77

2. Well above comparable historic levels because:

--prices had to be high enough to draw nearly 2.5 billion bushels out of storage and into the market

--loan rate was the lowest in 12 years

C. For 1989/90:

1. With carry-out stocks projected to be in the 1.8-1.9 bil. bu. range, the season average price looks to be in the range of 125-135% of loan

2. With the loan rate = $1.65, this projects to an average price in the $2.10-$2.30 range

SLIDE 4: CORN OHIO AVERAGE FARM PRICES

A. This shows seasonal pricing patterns

B. The sharp run-up in prices during the early summer drought in 1988 is obvious

--this set the stage for the relatively high prices for the 1988/89 marketing year

C. Prices tailed-off at a fairly modest pace throughout 1988/89

1. This is typical of a "short crop" year

2. Prices never appreciated enough to cover post-harvest carrying costs

D. Projections for 1989/90 are based on what is a very stable historic seasonal pattern in years of relatively normal crops that follow "short crop" years

1. Actual 1989/90 Ohio average prices:

September = $2.37

October = $2.30

2. Prices should reach seasonal highs in late spring at levels roughly 25-30 cents above expected post-harvest lows in the $2 neighborhood

SLIDE 5: 1990 CORN PROGRAM

A. This graph charts the returns above variable costs for a fairly typical Ohio corn grower participating in the 1990 acreage reduction program compared with returns without participation

B. The "break even" price is about $2.58

--This compares to a preliminary expectation for an average 1990/91 price centering around $2

C. Thus, participation in next year's corn program would appear to again be in the 75% + range

SLIDE 6: SOYBEANS SUPPLY AND USE

	1988/89	change	projected 1989/90	change
planted acreage (mil)	58.9	+1.0%	60.5	+3%
harvested acreage (mil)	57.4	+1.0%	59.1	+3%
yield (bu/ac)	27.3	-19.0%	32.6	+20%
production (mil bu)	1,566	-18.6%	1,926	+23%
carry-in (mil bu)	302	-30.7%	182	-40%
total supply (mil bu)	1,868	-20.8%	2,108	+13%
domestic crush (mil bu)	1,060	-9.7%	1,110	+5%
total domestic use (mil bu)	1,156	-7.9%	1,205	+4%
exports (mil bu)	530	-33.9%	575	+8%
total use (mil bu)	1,686	-18.0%	1,780	+6%
carry-out (mil bu)	182	-39.7%	328	+80%

A. 1988/89 comments:

1. Total supply was the smallest since 1976

   a. crop was also the smallest since 1976

      --U.S. accounted for only about 45% of world production, down from 60-65% in late 1970s/early 1980s

   b. carry-in was down 43% from its record high level 2 years earlier

2. Most of the cut in use was in exports

   a. nearly all of the decline was in shipments to the European Community

b. a 7% acreage increase outside the U.S. added significantly to competitive supplies

--Brazil +10%

--Paraguay +11%

--Argentina +18%

3. Domestic crush declined nearly 10%

a. soymeal exports dropped 25% due to increased S. American competition

--most Brazilian soy exports are in the form of meal rather than whole beans

b. feeding rates dropped significantly in the first half of the year due to high prices for both meal and feed grains

4. Carry-out stocks fell by nearly 40% to less than 11% of annual use (39 days supply on September 1)

--lowest since 1983/84

B. 1989/90 comments:

1. Acreage up only 3% despite low carry-over supplies and relatively high 1988/89 prices

--trailed 1979's high by 11 million acres

2. Production up about 23% because of return to nearly normal yields

--yet, U.S. share of world total increased only from about 45% to 48%

--Argentina +60%

3. total supplies up only 13% due to lower carry-over

--will support a modest increase in total use

--probably 25-30% of the use lost due to last year's short supply can be regained with this year's larger supply

4. Domestic crush should re-gain 40-45% of last year's loss

a. soymeal feeding will increase 8-10%

--expanded poultry production points to an increase in the number of high-protein consuming animal units

--lower meal prices will encourage higher feeding rates

b. soymeal exports will be flat as virtually all of the larger S. American crop is showing up on world markets as meal

5. Whole bean exports have only limited upward potential

a. S. American supplies were slow to come to the market due to strong inflation-hedging holding by Brazilian producers

--this has provided unusual competition for U.S. beans this fall

--with another significant increase in Argentine production expected this year, the extended 1989 S. American marketings shrink the U.S. window of opportunity in world markets to roughly the December-April period (compared to more traditional September-May period)

b. EC crushing demand should strengthen somewhat during the winter due to shorter 1989 oilseed crop

c. Granting "Most Favored Nation" (MFN) status to the USSR would make easier credit available, raising Soviet import prospects

6. With only modest increase in disappearance, carry-out stocks look to return to the 300 mil. bu. level

--16-18% of annual use

SLIDE 7: SOYBEANS STOCKS-PRICE RELATIONSHIP

A. 1988/89 prices averaged $7.39

--155% of the $4.77 national average loan rate

--about in line with historic price behavior when supplies are around 110% of use

B. With 1989/90 total supplies around 116-118% of expected use:

--Prices for the season should average 125% to 135% of loan

C. With the 1989 national average loan = $4.53, this implies a season average price in the $5.60-$6.10 range

SLIDE 8: 1989/90 SOYBEAN PRICE PROSPECTS

A. Soymeal prices are projected to be in the $165-185/ton range

1. Over the past 15 years, soymeal:corn price ratio has averaged about 2:1 (price per pound)

2. In recent years, the ratio has trended irregularly upward

--averaged 2.6 over the past 4 years, but biased upward by unusually low corn prices in 1986, 1987

3. Projections are based on corn price expectations in the $2.10-2.30 range and the meal:corn price ratio in the 2.2:1 to 2.3:1 range

B. Soyoil prices through next summer are trading in roughly the 18-20 cent/pound range

1. Soyoil prices seldom move much above the 20 cent level unless carry-out stocks fall below roughly 1-1.2 bil. pounds

2. For the 4th consecutive year, 1989/90 soyoil carry-out looks to be in the 1.7-2 bil. lb. range

C. Deducting a 30-50 cent/bu. crush margin from the projected product values yields a whole bean value in the same $5.60-$6.10 range as indicated by the stocks:loan ratio, above

SLIDE 9: SOYBEANS OHIO AVERAGE FARM PRICES

A. 1987/88 shows the sharp price run-up during the drought of 1988

B. During 1988/89 prices dropped off rapidly

1. High prices in the summer of 1988 quickly discouraged buyers

2. Buyers could more easily turn to alternative supplies than in earlier droughts because of the declining U.S. share of world production

3. Average monthly prices ended the year $2.30 below where they started

4. More clearly than for corn, this demonstrates the "long market tail" in short crop years

C. Projections for 1989/90 are based on a reasonably consistent seasonal pattern in previous normal crop years that follow short crop years

--but, seasonal pattern is somewhat less dependable than for corn, thus greater uncertainty regarding the forecast

D. Actual 1989/90 prices:

September = $5.98

October = $5.41

E. Post harvest prices normally wouldn't bottom out until November or December

--but because of strong farmer holding at harvest, October may be close to this year's low

F. A May-June high of about $6 is necessary to fully recover post harvest holding costs

1. The normal seasonal pattern shows this as a definite possibility

2. But, as this is after next spring's S. American harvest, it will be affected by:

   a. size of the 1990 S. American crop,

   b. timing of sales of the 1990 S. American crop on world markets, and

   c. size of 1990 U.S. plantings

3 Because of the uncertainty, buying a July call option may be a less risky way of speculating on price increases than storing the crop

SLIDE 10: WHEAT SUPPLY AND USE

	1988/89	change	projected 1989/90	change
planted acreage (mil)	65.5	-0.5%	76.8	+17%
harvested acreage (mil)	53.2	-5.0%	62.7	+18%
yield (bu/ac)	34.1	-9.6%	32.9	-4%
production (mil bu)	1,811	-14.1%	2,042	+13%
carry-in (mil bu)	1,261	-30.8%	698	-45%
total supply (mil bu)	3,096	-21.5%	2,760	-11%
domestic food (mil bu)	823	+1.5%	835	+1%
total domestic use (mil bu)	978	-10.4%	1,000	+2%
exports (mil bu)	1,425	-10.5%	1,325	-7%
total use (mil bu)	2,403	-10.5%	2,325	-3%
carry-out (mil bu)	698	-44.7%	435	-38%

A. 1988/89 comments:

1. Total supplies, down 31%, were the lowest since 1979
2. Both domestic use and exports were down roughly 10% due to limited supplies
3. Carry-out was less than 700 mil. bu., lowest in 13 years
   a. in the past 2 years, carry-over stocks have been reduced by nearly 1.2 billion bushels
   b. prices have risen 50% in the same period--large stocks do have a real cost

B. 1989/90 comments:

1. Because of lower carry-over, total supplies are down 11% despite:
   a. an 18% increase in harvested acreage

b. a 13% increase in total production

2. Total use will be reduced because of the tight supply situation

a. domestic use will increase about in line with population growth

--feed use is largely confined to off-quality and damaged grain

b. exports were up about 6% through first 5 months of the marketing year

--cannot be maintained in light of tight supplies and larger fall wheat harvest in Canada and northern Europe

3. Carry-out looks to fall by another 35-40%

--will probably be their lowest since 1973/74 (when prices more than doubled)

SLIDE 11: WHEAT STOCKS-PRICE RELATIONSHIP

A. 1988/89 prices averaged $3.86

--175% of the national average loan rate of $2.21

B. With year-ending stocks sliding downward toward 400 mil. bu., the season average price looks to be roughly double the national average $2.06 loan rate

C. Soft red winter wheat prices will probably trail national averages by 6-10%, compared to a 5-10% premium in the past two years

--SRW supplies are up about 11% on the biggest crop since 1982

D. Ohio prices should average in the $3.75-$4.10 range for the 1989/90 marketing year

SLIDE 12: WHEAT OHIO AVERAGE FARM PRICES

A. There has been a very distinct seasonal price pattern in years when year-ending stocks decline sharply (25% of more)

B. 1989/90 actual prices:

June = $3.70

July = $3.75

August = $3.73

September = $3.73

October = $3.81

C. Seasonal price high in the $4.15-4.25 range expected in early 1990

1. Should more than cover post-harvest holding costs

2. With a 5 mil. acre boost in 1990 crop possible given changes in the wheat program:

--this might also provide an excellent pricing opportunity for some of the 1990 crop

SLIDE 13: 1990 WHEAT PROGRAM

A. Major program changes:

1. ARP reduced from 10% to 5%

2. Over-planting provision added

a. allows planting up to 105% of base acreage

b. "penalty" for over-planting is loss of deficiency payment on 1% of permitted acreage for each 1% of acreage planted above permitted acreage, e.g.

--plant 95% of base acreage (100% of permitted acreage), receive deficiency payment on 95% of base

--plant 100% of base (permitted acreage + 5% of base), receive deficiency payment on 90% of base (95% - 5% penalty for over-planting)

--plant 105% of base, receive deficiency payment on 85% of base

3. Target price reduced from $4.10 to $4.00

4. Loan rate reduced from $2.06 to $1.95

B. Break-even price for conventional 5% ARP is about $3.85

1. Above expected price for 1990 crop in the lower $3 range, assuming normal weather and wide-spread base over-planting

2. Foregone revenues from participation in 5% ARP if price is above the break-even level is relatively small because the foregone production is only on 5% of the base

C. Over-planting provision is a more profitable option than non-participation regardless of actual market price

1. 5% more production can be sold than when 100% of base is planted without participation

2. 85% of the crop receives deficiency payments when market price is below $4.00 target compared to 0% for nonparticipant

D. Market price would have to fall below about $3.00 in order for participant to be better off with 5% ARP than planting 105% of base

E. Breaks new ground for government programs by assuring the 105% participant of greater returns from participation than non-participation

--that is, there is no situation where the participant would pay a penalty for being in the program

F. Virtually assures an expansion in planted acreage

SLIDE 14: 1990 OHIO CROP COMPARISONS

A. Projections are based on:

1. Fairly typical average crop yields in Ohio

2. Price expectations for 1990 crops that assume normal weather and relatively steady use levels

3. Variable costs based on Extension's 1989 Ohio budgets adjusted somewhat to reflect probable changes in input prices

B. Returns above variable costs (or returns to fixed costs, including land), based solely on market prices (no deficiency payments for program crops):

--show a modest advantage for soybeans compared to corn

--show a significant advantage for soybeans compared to wheat

C. Comparisons are added for two minor crops: oats and canola

1. Market returns show little incentive for oats

2. Canola compares surprisingly well with corn and soybeans

3. But, considerable risk with canola

a. production techniques are still largely "trial and error"

b. market is not well developed

--relatively few experienced handlers

--crushers are just getting established

--essentially no secondary market to remove supplies that exceed crusher demand

--price relationship between canola oil and soy oil is still tentative

4. Nonetheless, potential market returns suggest that canola may be worth a trial for those willing to experiment and take some additional risks

D. As has been true since enactment of the 1985 farm bill, when deficiency payments are included for corn, wheat, and oats program participants, the economic incentive to plant corn on all possible permitted acres is obvious

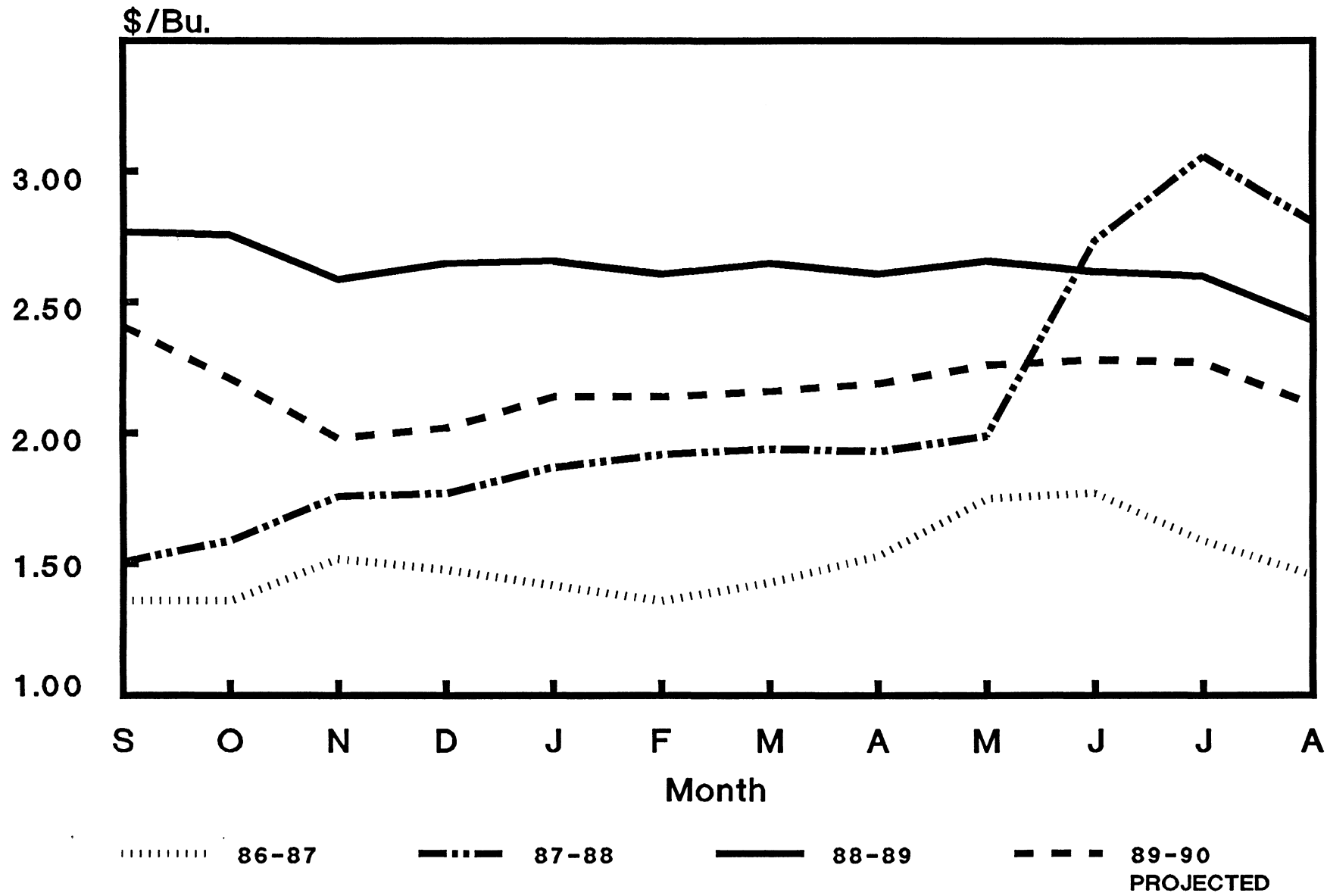
1. Also makes wheat about as attractive as oilseeds

2. Even with a short-fall in domestic supplies, oats remain economically unappealing

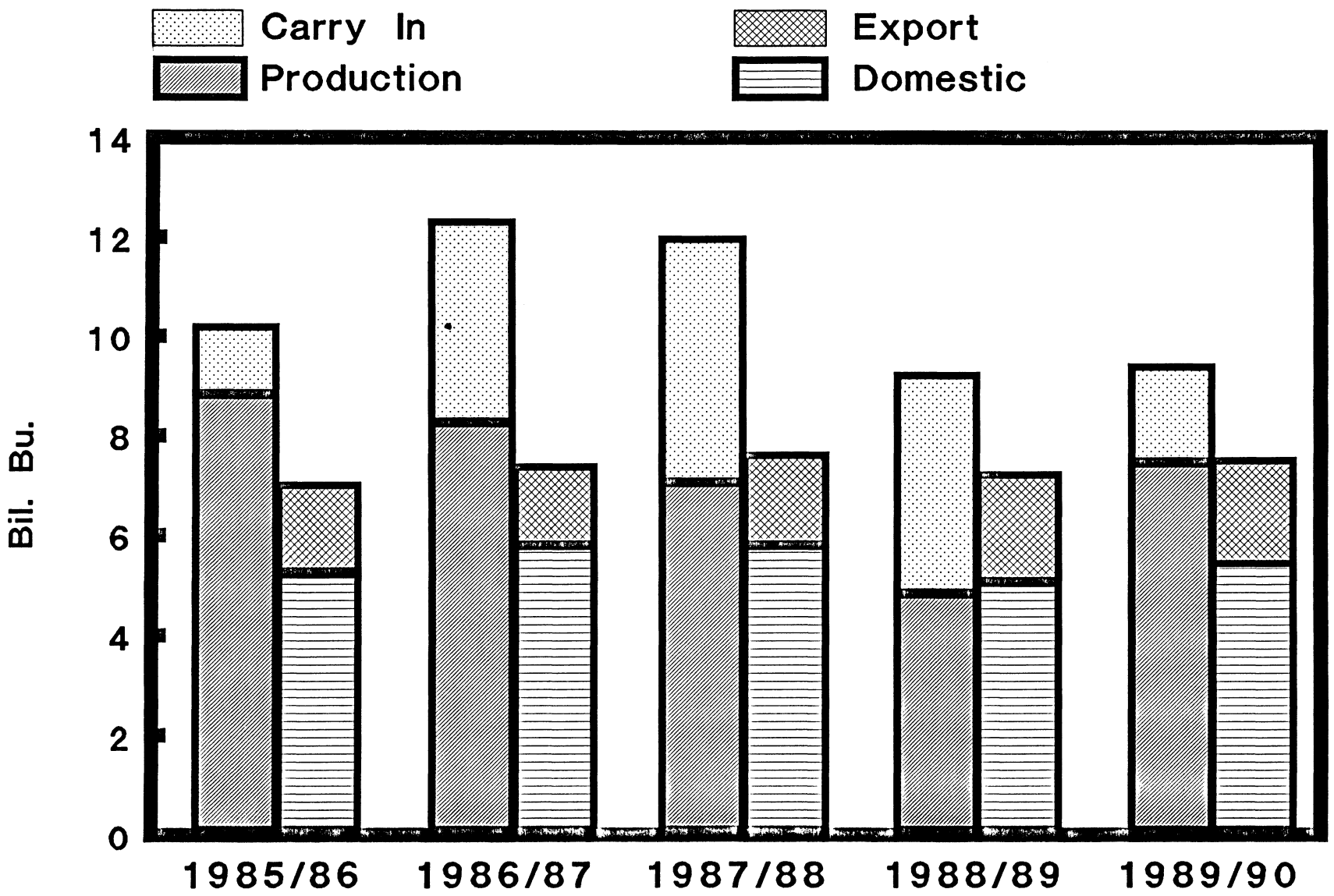
--target price of $1.45 is not high enough to make the crop competitive with any of the alternatives with or without government payments

E. Any future effort to effectively reduce deficiency payments (triple base, decoupling, lower target prices, or whatever) should result in an acreage switch from grains to oilseeds

CORN: OHIO AVERAGE FARM PRICES



Corn: Supply and Use

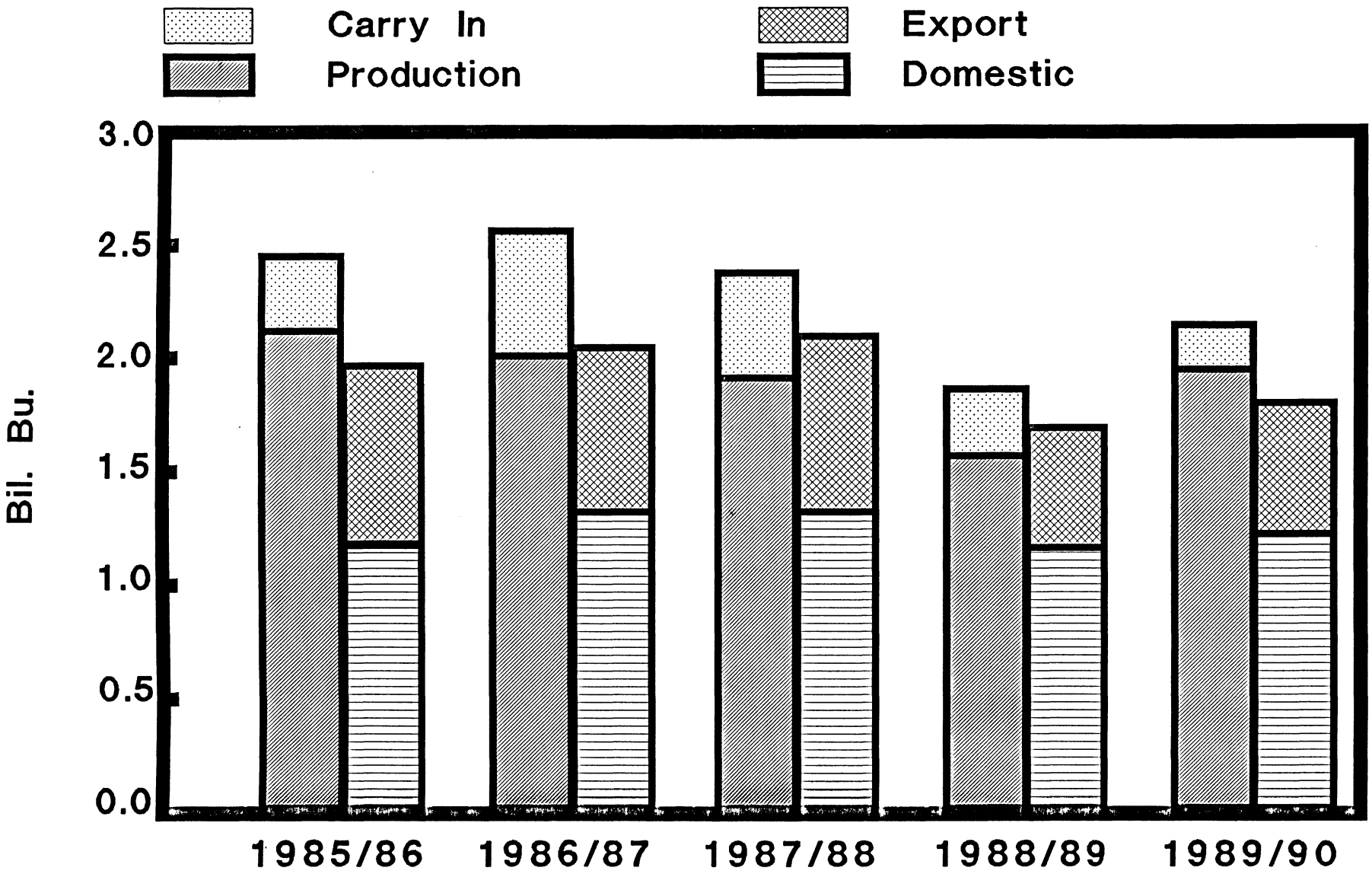


1989-90 SOYBEAN PRICE PROSPECTS
(Decatur, Ill.)

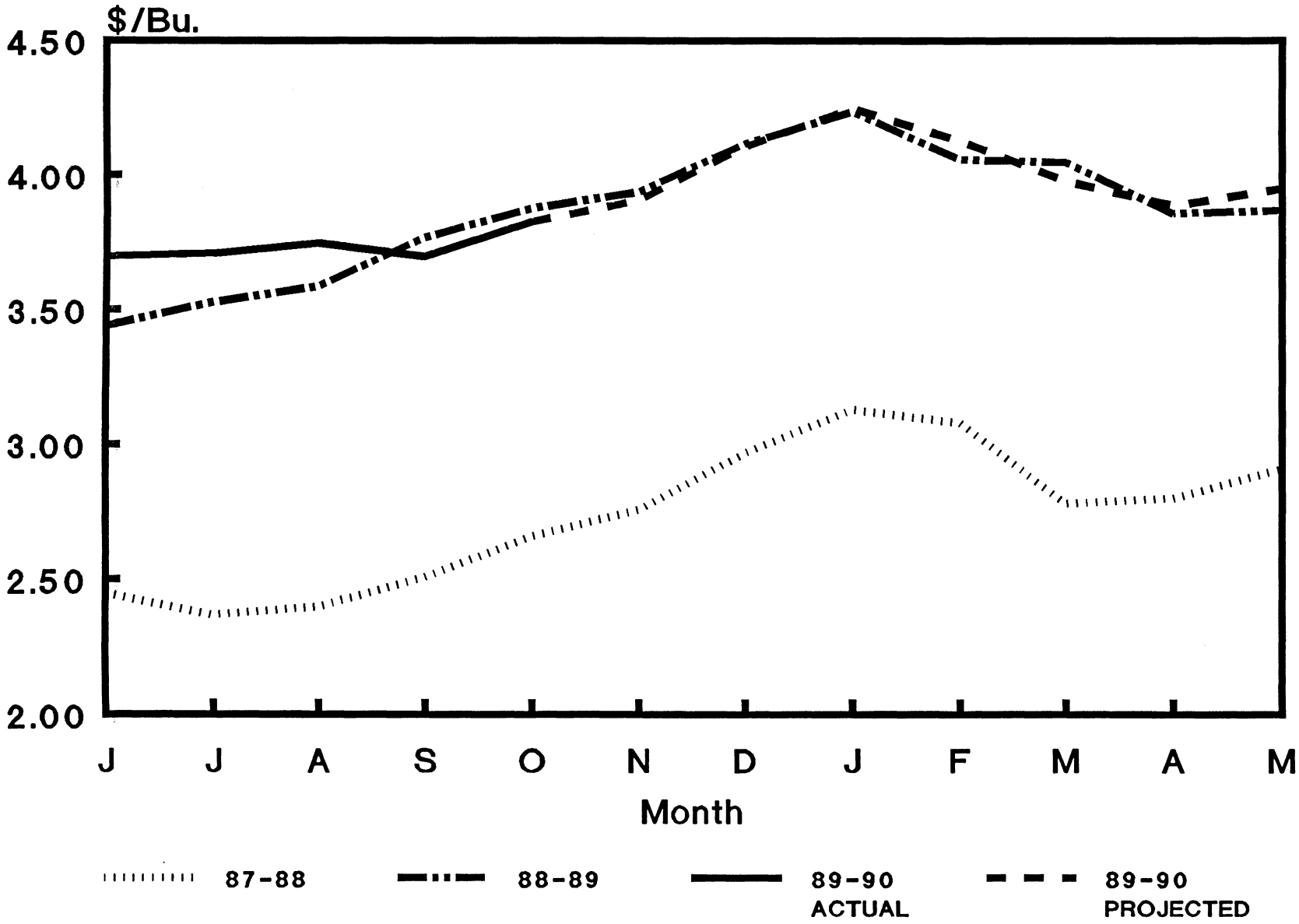
	Per Bu.	Price	Value
Meal (Ton)	47.5#	$165-185	$3.92 to 4.39
Oil (Lb.)	11.0#	$0.18-0.20	$1.98 to 2.20
Total			$5.90 to 6.59

Minus Crushing Margins

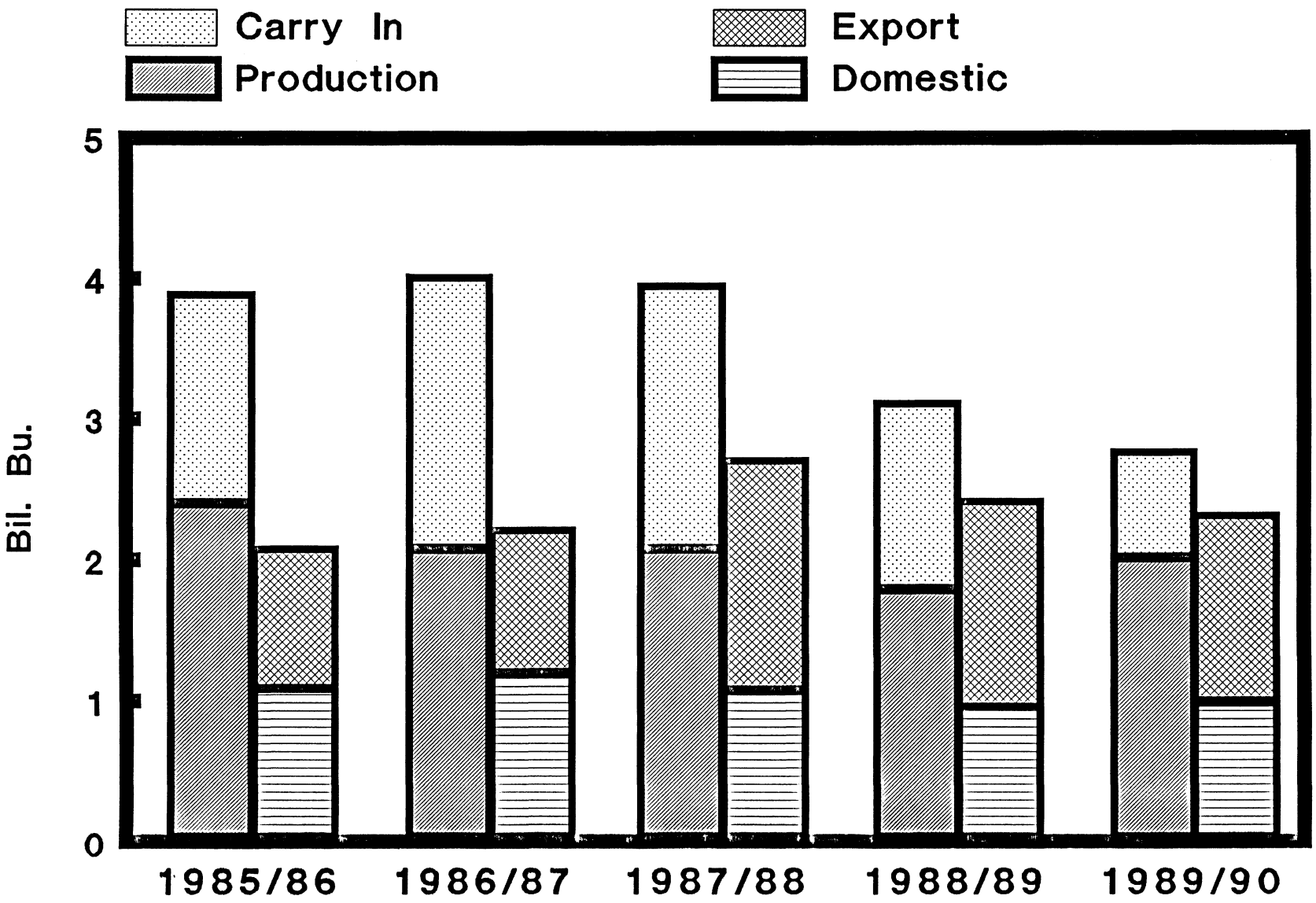
Soybeans: Supply and Use



WHEAT: OHIO AVERAGE FARM PRICES



Wheat: Supply and Use



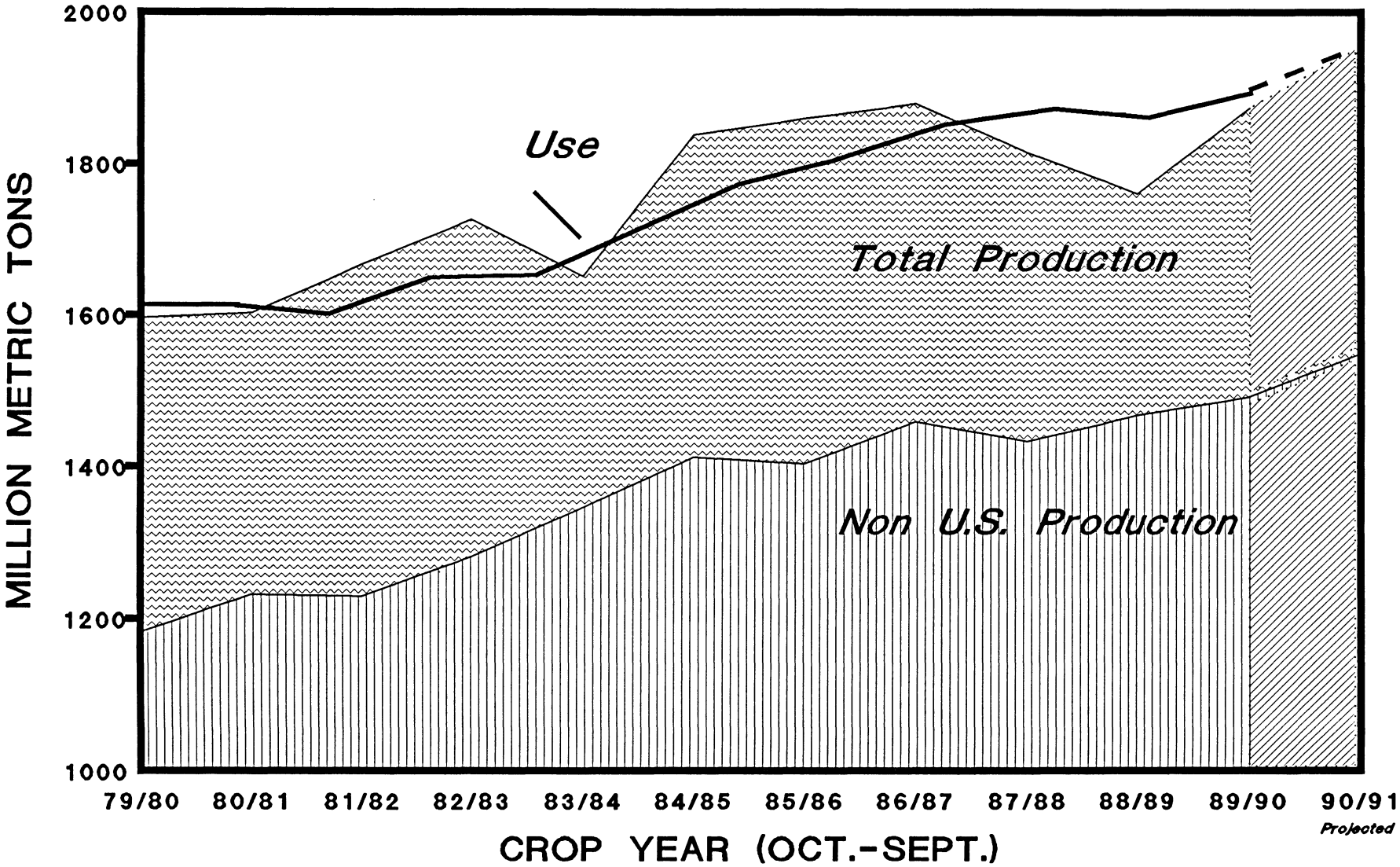
1990 Ohio Crop Comparisons

per acre	Corn	Soybeans	Wheat	Oats	Canola
Yield (bu.)	120	40	50	75	40
Market Price ($/bu.)	2.00	5.50	3.25	1.50	4.75
Market Returns ($)	240	220	162	112	190
Variable Costs ($)	150	110	95	65	90
Market Returns to Fixed Costs ($)	90	110	67	47	100
Deficiency Payment ($)	80	na	35	0	na
Net Returns to Fixed Costs* ($)	170	110	102	47	100

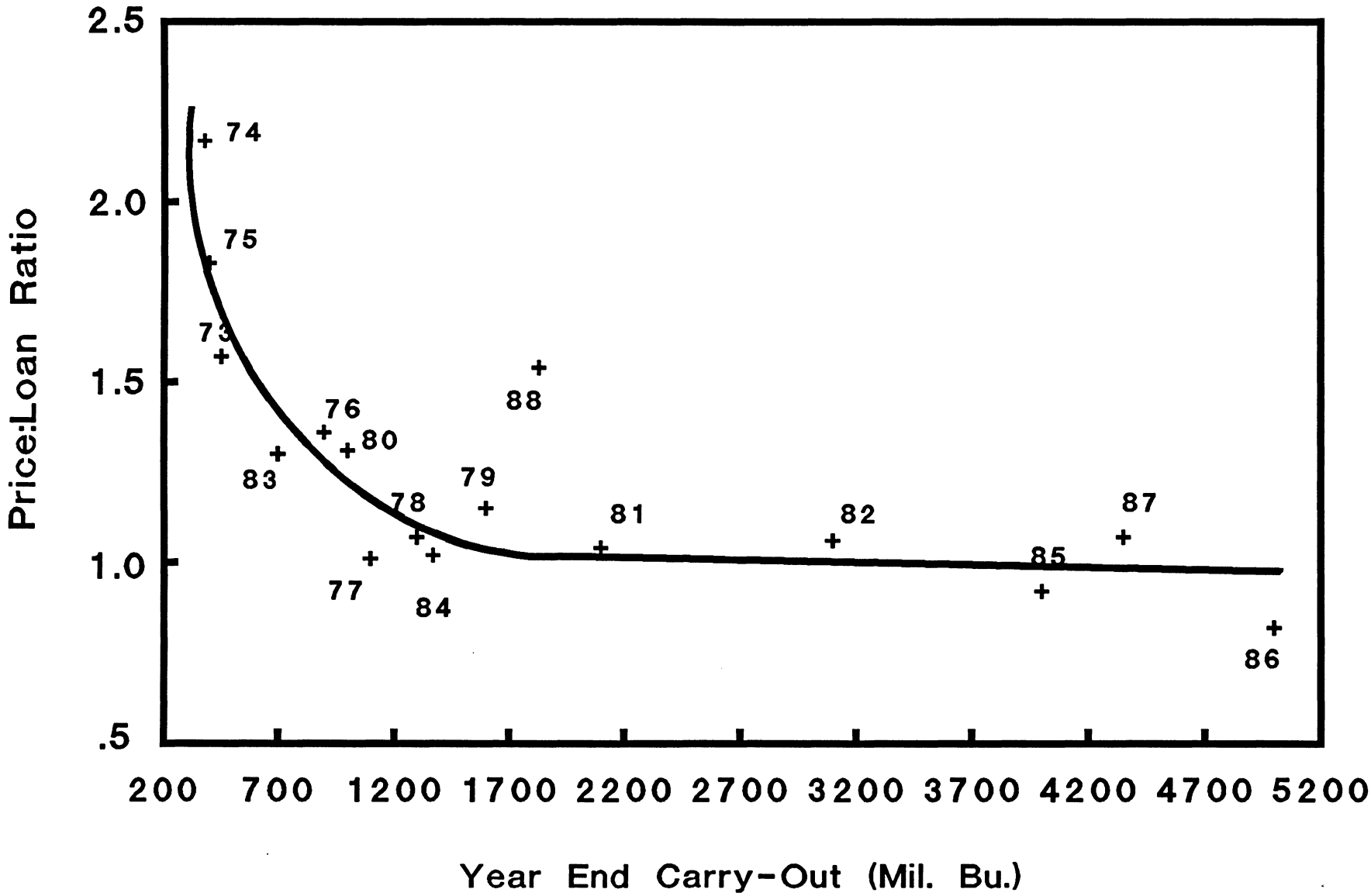
na = not available

* = includes returns to land

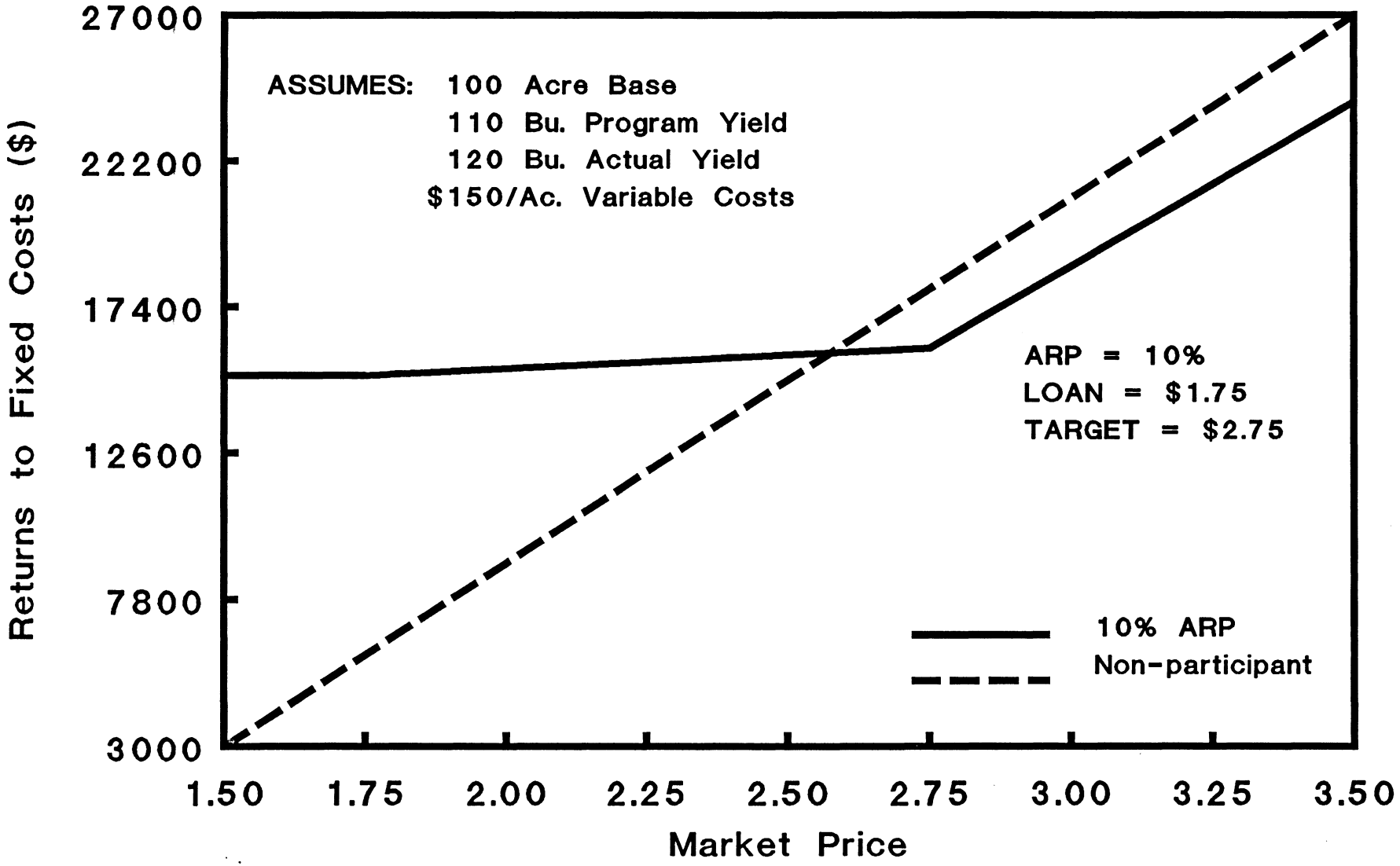
WORLD GRAIN AND OILSEED PRODUCTION AND USE



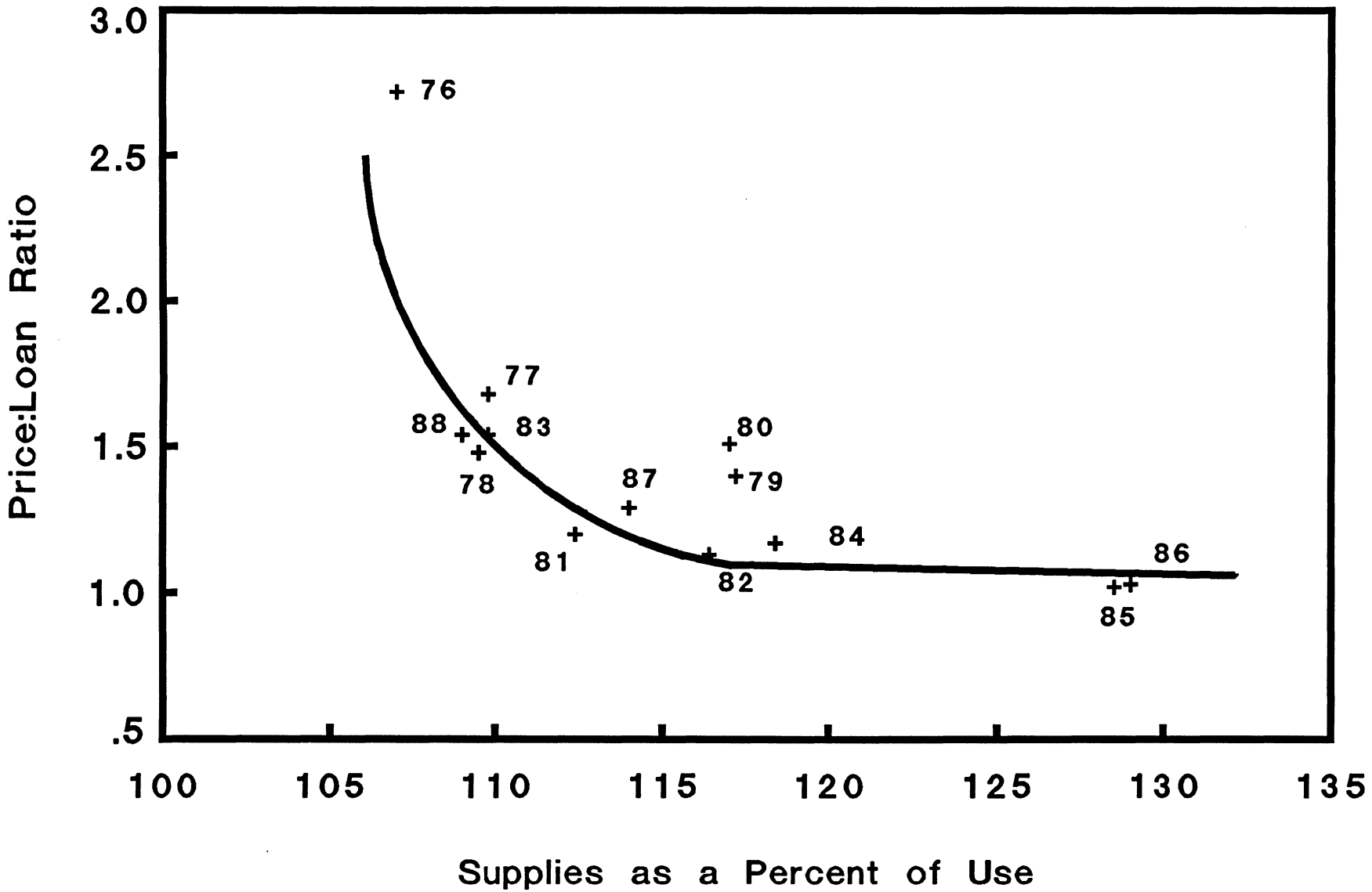
Corn: Stocks-Price Relationship



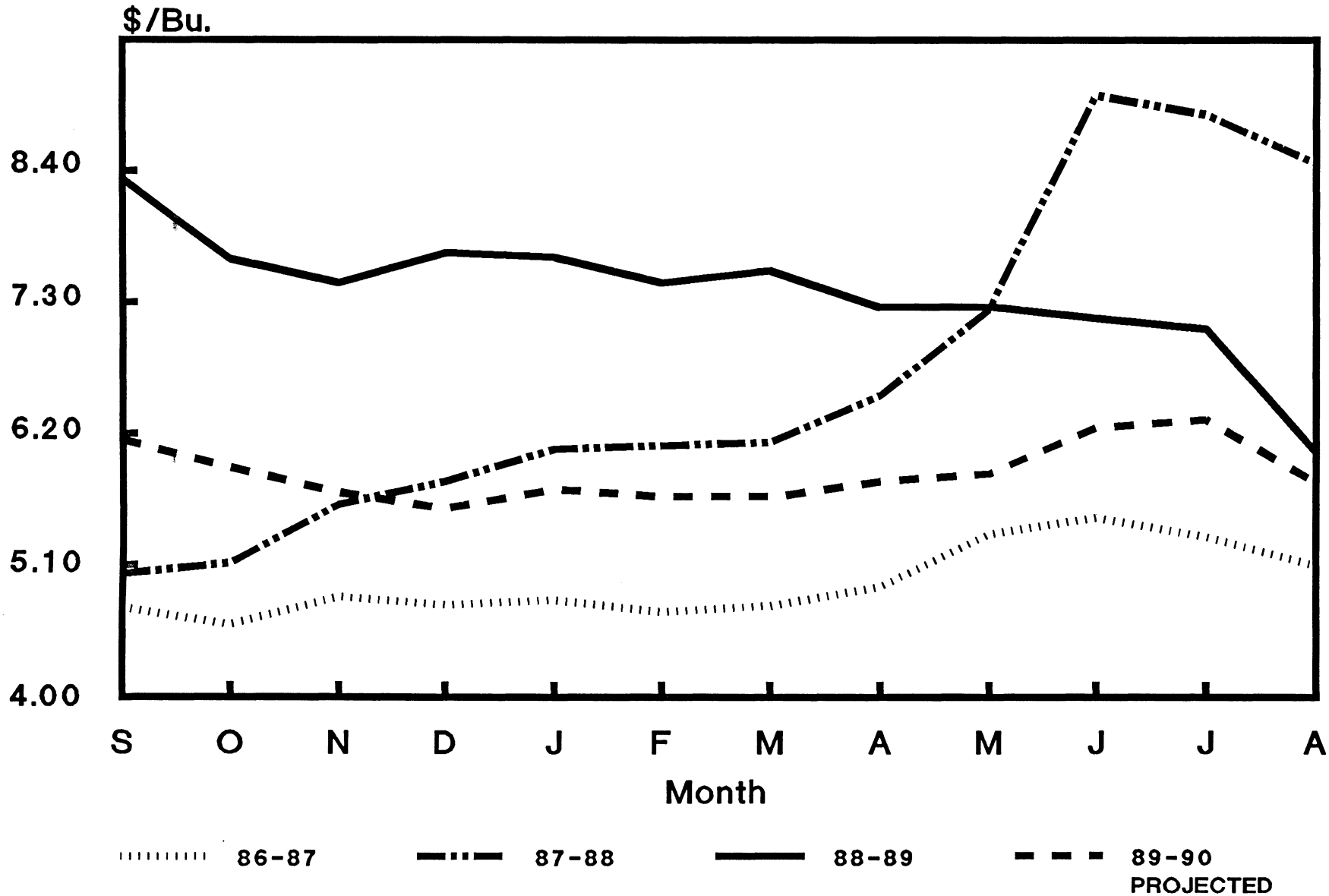
1990 CORN PROGRAM



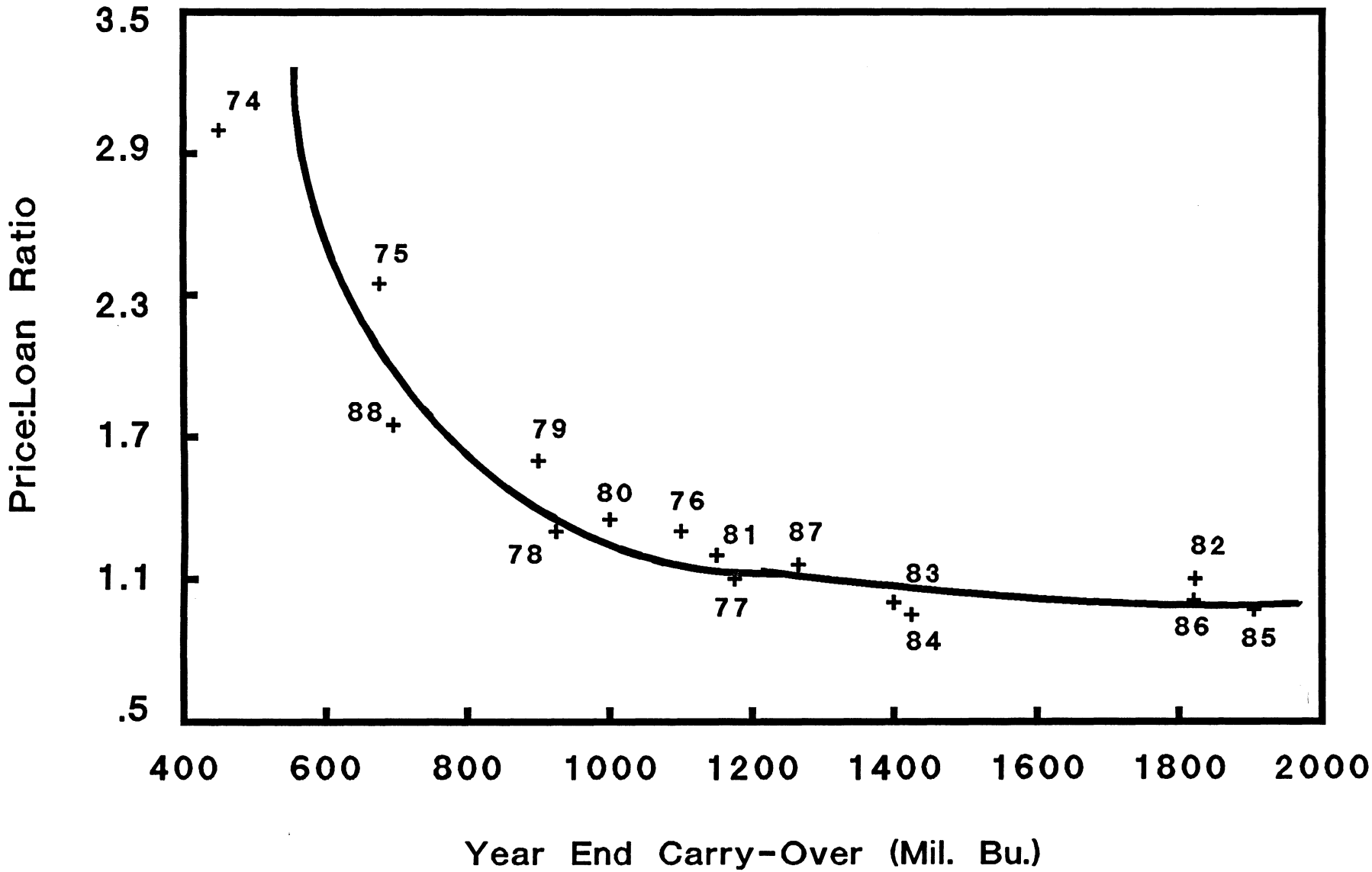
Soybeans: Stocks-Price Relationship



SOYBEANS: OHIO AVERAGE FARM PRICES



Wheat: Stocks-Price Relationship



1990 WHEAT PROGRAM